

EMPIRE COTTON GROWING CORPORATION.

REPORT OF THE ADMINISTRATIVE COUNCIL OF THE CORPORATION ADOPTED AT THE THIRD ANNUAL GENERAL MEETING ON OCTOBER 23rd, 1924.

The Administrative Council have pleasure in submitting their report on the activities of the Corporation during the year that has elapsed since the last General Meeting was held.

On that occasion it was explained that, although the Charter was granted on November 1st, 1921, the Corporation can hardly be said to have been firmly established until the Cotton Industry Act became law on July 18th, 1923. A certain amount of preparatory work was done prior to the passing of the Act, and various schemes were carefully considered in order that they might be in readiness to be put into execution so soon as the financial position should have been assured.

The activities of the Corporation during the past year, in the various branches of its work, are reviewed below under their different headings.

In addition to concrete action in various cotton-growing countries, the Corporation hope that they have been able to influence action in various directions by the Imperial and Overseas Governments that is calculated ultimately, and in some cases immediately, to extend the cultivation of cotton within the Empire. Thus, in response to a request by the President of the Board of Trade, a memorandum was prepared for submission to members of the Imperial Economic Conference indicating the broad lines along which, in the opinion of the Corporation, the Empire's production

of cotton could best be extensively increased. Again, the Corporation made strenuous representations with a view to securing that the great project of Gezira development should not be delayed through lack of funds, and it is particularly gratifying to record that the successful completion of this work now appears to be freed from this menace. The Kassala scheme also owes a good deal to the support given from its inception by the Corporation.

The need for railway development, especially in Africa, has been repeatedly urged, and it is satisfactory to be able to report that the provision of funds for the extension of the Uganda Railway, and for railway extension in Tanganyika, has now been sanctioned. The improved transport facilities that will result should have a marked effect in stimulating the steadily increasing output from both countries. Details of these important developments are given below. Mr. Keatinge's mission to South Africa has given a considerable impetus to cotton production in the Union, and the Executive Committee are confident that much can be expected from Natal, the Transvaal, Zululand and Swaziland, especially when the projected railway has been completed from Somkele to the Pongola River.

The Corporation note with satisfaction that the Parliamentary Commission appointed by the Secretary of State for the Colonies to visit the five East African Dependencies, have been specifically directed to report on the possibilities of increasing the production of cotton throughout East Africa. The Commission's report cannot fail to direct public attention to the importance of the object for which the Corporation was founded, and it will doubtless indicate directions in which this body can usefully co-operate in developing the resources of the countries which the Commission will visit.

The Council have to deplore the death during the past year of Sir Frank Hollins, one of their Vice-Presidents, and of Mr. J. Barber Lomax, a member of the Council and of the Executive Committee. They have also accepted with regret the resignation, through pressure of other work, of Lord Ashfield, one of their

Vice-Presidents. Members will be gratified to learn that Sir George Lloyd, G.C.I.E., formerly Governor of Bombay, has accepted appointment as a Vice-President of the Corporation. In order to secure continuity in the representation of the Liverpool and Manchester Cotton Associations, the Presidents of those bodies have been co-opted members of Council *ex-officio* and appointed members of the Executive Committee. Mr. Frank Wright has been appointed a member of the latter body in place of the late Mr. J. Barber Lomax.

LEVY.

The Executive Committee have already announced in the Quarterly Reports to Council that all spinning firms that had contributed to the voluntary levy had been notified that their contributions would be repaid if desired: at the same time the hope was expressed that firms would allow their contributions to be retained as donations to the Corporation. Claims for repayment, amounting to £62,775 were received, leaving a balance of nearly £25,000. The thanks of the Corporation are due to those firms that did not claim the repayment of their voluntary contributions: at the same time recognition must be given of the fact that many firms who claimed repayment would have desired to leave their voluntary contributions in the hands of the Corporation, but felt that, in the existing state of trade, their duties to their shareholders did not justify such action.

As regards the method of collection of the statutory levy, practically all the spinning firms elected to pay their contributions through their brokers, and the thanks of the Corporation are due to the Liverpool and Manchester Cotton Associations and to brokers who are not members of either of those two bodies, for having given effect to this desire on the part of spinners by adding the sums due under the Cotton Industry Act to their invoices on cotton purchased through them, and transmitting the amounts thus received to the Corporation. This action has been of the greatest possible assistance in facilitating the collection of the levy. The amount received under the terms of the Act for the year August 1st, 1923, to July 31st, 1924, was £63,468. It may perhaps be pointed out in this connection that some of the cotton delivered to spinners during this period was purchased, for forward delivery, before the Act came into force and was, therefore, not liable to pay the levy.

FINANCE.

Copies of the Revenue and Expenditure Account and the Balance Sheet for the financial year ended March 31st, 1924, will be found at the end of this Report. From the former it will be seen that the amount received during this period as interest and dividends from the investments representing the Capital Grant amounted to £55,411. The amount realised from the Levy from July 18th, 1923, until March 31st, 1924, totalled £34,521 : £717 were received as interest on investments made from surplus income, Bank Interest amounted to £263, and nearly £26 were realised by the sale of reports. The total income during the year ending March 31st last, excluding the voluntary levy collected up to July 18th, 1923, thus amounted to £90,938. The balance of the voluntary levy, after repayment of claims, appears in the Balance Sheet.

Turning to the expenditure side of the account, it will be seen that £35,664 was spent during the financial year. Such amounts as have not been required to meet current expenditure have from time to time been invested in Treasury Bonds. The expenditure during the period covered by the audit is naturally much smaller than that which will normally be incurred in future, seeing that in this first year, during only a part of which the Corporation's financial position has been placed on a firm basis, there has not been sufficient time for their plans for increasing cotton production to be more than set on foot. These schemes will call for considerably increased sums as they are developed, and the rate of expenditure at the present time already shows that the Corporation's operations will soon fully absorb all the funds that appear likely to be at their disposal.

INDIA.

The Corporation have kept in close touch with the Indian Central Cotton Committee during the year, and Mr. Roberts has kindly agreed to act as their representative on the Committee for a further year.

The Indian Sub-Committee of the Corporation had under consideration the question of the steps that might be taken in order to bring further under the immediate notice of spinners the merits of those Indian cottons that are suitable for use in Lancashire, and especially of new types. As a first step, the Oldham Master Cotton Spinners' Association were kind enough to arrange

that spinning tests should be carried out on certain typical Indian cottons already well-known in this country on bales which were purchased on the market in the ordinary way on behalf of the Corporation. The Indian Central Cotton Committee is now sending home a further supply of improved cottons. Spinning tests will similarly be carried out upon them, so that their properties may be compared with those already tested. The Secretary of the Indian Central Cotton Committee has undertaken to supply information as to the quantities available of each of the improved types that are being sent.

On the publication of the Report of Lord Lee's Commission on the Indian Services, the Chairman and the Director sought an interview with the Secretary of State, and communicated to him the apprehension felt by the Corporation that the adoption of the Commission's recommendations would render impossible the recruitment of the best kind of European technical officers for agricultural service in India, and laid stress on the consequent deterioration which they feared would follow in the quality of the India cotton crop. Lord Olivier heard the Corporation's views with the greatest courtesy, but it is feared that the political situation in India will render inevitable the adoption of, at all events, the main findings of Lord Lee's Commission.

It will be remembered that an invitation has been extended to any members of the Indian Central Cotton Committee, who may from time to time be in England, to attend the meetings of the Administrative Council, and members were glad to welcome the following gentlemen at the meeting of Council held on June 25th last—Mr. B. C. Burt, Mr. H. Conville, Dr. Harold Mann, and Mr. W. Roberts. Mr. Burt very kindly outlined his Committee's programme of work with regard to research, and the efforts they were making to improve the marketing of Indian cottons. Dr. Mann gave some particulars of the future prospects of cotton growing in Sind under the Lloyd Barrage Canal System. An interesting discussion took place regarding the ways in which the Corporation could assist the work of the Indian Central Cotton Committee.

AUSTRALIA.

It is satisfactory to report that the Queensland Government have accorded to the Corporation's Cotton Specialist, Mr. G. Evans, the title of Director of Cotton Culture. This appointment will in no way affect Mr. Evans' relations with the Corporation, but the

Government's action may be taken as indicating their satisfaction with the work that Mr. Evans has been able to carry out in Australia.

Mr. Evans drew the attention of the Corporation to the need in Australia for an experienced entomologist to devote himself entirely to cotton pests. The matter was carefully considered by the Executive Committee, and it was decided that an entomologist, with a special knowledge of cotton pests, should be appointed. The Committee felt that it would be best to offer the loan of the services of this officer in the first instance to the Government of the Commonwealth of Australia, in order that he might be available for consultation, not only in Queensland, but also in the other States of Australia. This offer was cordially accepted by the Commonwealth Government and Mr. E. Ballard was accordingly appointed; he arrived in Australia in March last. Mr. Ballard took his degree in science at Cambridge in 1910 and has had some seven-and-a-half years' experience of entomological problems of cotton growing, partly in India and partly in Nyasaland.

Pink boll-worm has been found in Queensland, but at present the attack is only severe in the Rockhampton district, and in certain areas near the coast. It is hoped that by stringent precautionary measures the attack may be at least brought under control and, if possible, limited to the districts in which the pest is at present prevalent.

The Director was able to discuss matters with both Mr. Bruce, Prime Minister of Australia, and Mr. Theodore, Prime Minister of Queensland, during their stay in England, and it is gratifying to be able to report that Mr. Theodore expressed the greatest confidence in Mr. Evans, and requested the Director to thank the Corporation most warmly for having acceded to his request for a cotton specialist.

The chief question that was discussed with Mr. Bruce was the formation of a central experimental station and the establishment of a number of experimental farms in different areas. On Mr. Bruce's return to Australia a Cotton Advisory Committee was set up under the Chairmanship of Mr. Evans. The other members of the Committee are Mr. D. G. P. Darnell Smith and Mr. A. H. E. MacDonald, the Biologist and Chief Inspector of Agriculture respectively, of the New South Wales Department of Agriculture, Mr. H. C. Quodling, Director of Agriculture, Queensland Depart-

ment of Agriculture and Stock, Mr. W. G. Wells, Cotton Specialist of the Queensland Government, and Mr. E. Ballard. The Advisory Committee were requested to consider the action that could best be taken to co-ordinate the work that is necessary in Australia in regard to plant breeding, cultivation experiments, investigation of insect pests and diseases, and the training of experts, so far as they relate to cotton. The Advisory Committee reported at the end of June, but their Report had to be submitted to a Central Ministerial Committee for approval and is still awaited from the Commonwealth Government.

It is recognised by the Committee that the output of cotton in Australia will probably for some time to come be necessarily limited by the difficulties arising from sparse population, and that expenditure on experimental work may be high in the early years in proportion to the amount exported, yet at the same time it is necessary to take the long view in the hope that this difficulty will eventually be overcome. Mention may also be made of the agitation among certain farmers in Queensland against the Government's prohibition of ratoon cotton. It is true that ratoon cotton, especially if carefully cultivated, is commercially useable, but it has been the general experience in cotton-growing countries that the practice of ratooning has led to deterioration and to an increase in insect pests, and these facts have doubtless influenced the action of the Queensland Government, who have consistently followed the policy of aiming at the production of only the best and purest types of cotton suitable to the existing climatic conditions.

Mr. Evans reports that the season which has just finished has not been at all favourable for increased cotton production. The attacks of insect pests have been severe; a shortage of rain at the commencement of the season did not allow of sufficient sub-soil moisture to render early planting successful; a certain amount of damage was caused in some districts by frost, and lack of rain later in the season has decreased the yield considerably. The crop in Queensland harvested in 1924 is now reported to be roughly 10,000 bales.

SOUTH AFRICA.

Mr. Keatinge's Report on the possibilities of cotton growing in South Africa has undoubtedly given a considerable impetus to this industry in the Union. General Smuts received a deputation

from the Corporation on October 25th, 1923, and gratefully accepted the offer of the Corporation to supply a small expert staff to assist the Government Department of Agriculture in the development of cotton growing. The Corporation have been fortunate enough to secure the services of Mr. S. Milligan, who relinquished the post of Agricultural Adviser to the Government of India to enter the service of the Corporation as Senior Expert in South Africa. Mr. Milligan arrived in South Africa at the end of May last, and in the limited time in which he has been in the country he has formed a distinctly optimistic impression regarding its possibilities for cotton-growing.

It is satisfactory to know that the change of Government in South Africa will in no way affect future development in this direction. It is understood that the new railway from Somkele northwards to the Pongola River, which runs through one of the chief cotton-producing parts, will be proceeded with, a development which should do much to encourage the industry in that area.

Mr. Milligan has also paid a preliminary visit to Swaziland, and he states that there is every evidence that the country is suitable for cotton growing on a large scale. The Corporation have under consideration suggestions from him as to the means whereby they can assist in this development.

Mr. F. R. Parnell, who held the post of Government Economic Botanist in Madras, has joined the Corporation's staff and has been sent out to Mr. Milligan to undertake plant breeding work.

A request was received last year through the Chief of the Tobacco and Cotton Division of the Union that the Corporation should offer a number of prizes for cotton-growing. It was accordingly decided that prizes should be offered for two classes of candidates, firstly those growing between 10 and 50 acres of cotton, and secondly for farmers growing 50 acres and over. The number of entries in the first class was so small that it was decided that the competition in this class should be abandoned. Nineteen competitors entered for the second class, and after 50 per cent. of the total marks to be awarded had been assigned by the Department of Agriculture for cultural methods and yield, samples of the cotton were sent home in order that the remaining 50 per cent. of the marks might be awarded on the quality of the lint by judges appointed by the Corporation. Messrs. Reynolds & Gibson and

Messrs. Wolstenholme & Holland very kindly consented to act as judges. The result was that the first prize of £100 was won by Messrs. Balman & Hannan, of Barberton; the second prize of £50 was awarded to the Tugela Estates, Natal; and the third prize of £25 was gained by the N'Kasini Estates, Natal.

ANGLO-EGYPTIAN SUDAN.

At the request of the Sudan Government, the Corporation arranged that Sir John Russell and Dr. H. M. Leake should pay a visit to that Territory in order to report to the Government and to the Corporation regarding the organisation of scientific work bearing on agriculture in the Sudan, and agreed to bear a part of the cost. A report of their tour has been received by the Corporation, and is under the joint consideration of the Executive Committee and the Sudan Government. A summary of the Report will be circulated to the members of the Administrative Council and of the Egypt and Sudan Sub-Committee.

The Report calls attention to the need for research work on the soil in order to deal with the problems that are likely to arise from salting, a source of trouble which is inherent in all irrigation schemes where natural drainage is deficient. It also advocates that steps should be taken to safeguard the supply of pure seed, and makes suggestions as to the organisation by means of which the work indicated can best be carried out. When the Sudan Government and the Sudan Plantations Syndicate have agreed as to the share which each should take in the work that is proposed, the Corporation's Sudan Sub-Committee will be asked to advise as to how effect can best be given to the recommendations contained in the Report. In the meantime the Corporation propose to lend their aid by supplying a soil chemist and a plant breeder, if suitably qualified men can be found.

The decision of Parliament to guarantee the balance of the loan required for the Makwar Dam and canalization project should enable the work to be completed next year if the present rate of construction is continued. The completion of the canalization now being carried out will enable an area of 300,000 feddans to be developed, of which one-third will be under cotton each year.

The Kassala Railway was opened for traffic so as to transport the current season's crop, though it was suspended again during the rains. Experience of the flood conditions is necessary in order

that information may be obtained as to the strength required for some of the bridges and culverts, but it is anticipated that all such work will be finally completed and the line in regular working in time for the next crop.

Advantage was taken of Dr. Leake's visit to the Sudan to ask him to pay a visit to the Upper Nile and Nuba Mountains country in order that the Corporation might be in possession of authoritative information as to its possibilities as a source of rain-grown cotton. Dr. Leake has reported that, so far as climate and soil are concerned, this area, and in fact the greater part of the Southern Sudan, should be capable of producing large quantities of cotton, the chief difficulties in its immediate development being lack of transport and sparseness of population. Development in the cultivation of rain-grown cotton south of the line at which the annual rainfall becomes adequate is now being actively pushed by the Sudan Government, which has recently appointed five extra agricultural inspectors so as to increase the personnel available for such work. The Sudan Government consulted the Corporation in the selection of these Inspectors. The recent high prices for cotton have stimulated considerable interest among native cultivators and the demands for seed for next year's crop show a remarkable advance.

UGANDA.

Of all the cotton-growing countries in the Empire this Protectorate has made the greatest strides during the last few years. The crop in 1914 totalled 37,000 bales, in 1923 it amounted to just under 100,000 bales, while the crop harvested this year has been estimated at 120,000 bales.

The Colonial Office have sanctioned considerable additions to the agricultural staff, and in order to assist the Protectorate in this respect the Corporation have appointed four of their last year's students to this country as supernumerary agricultural officers. These men will be paid in the first instance by the Corporation, and arrangements have been made with the Colonial Office and the local Government whereby they will be absorbed into the Government Agricultural Department as and when it is felt that the local Government can afford to include their salaries in their budget. In addition Mr. G. W. Nye, who held a Junior Studentship under the Corporation at Cambridge in 1922/23 and

a Senior Studentship at Trinidad in 1923/24, has been appointed by the Colonial Office as Government Cotton Botanist; Mr. C. E. J. Biggs, who held a Studentship at Cambridge last year, has been appointed an agricultural officer in the Government Service, while Dr. W. S. Martin, who spent his Studentship year at Rothamsted, has been appointed as the Government Agricultural Chemist. It will be seen, therefore, that the Corporation, through its Studentships, has been able to supply seven well-qualified men for service in the Protectorate.

Mr. S. Simpson, the Director of Agriculture, has been home on leave, and several discussions have taken place with him regarding the assistance the Corporation can render in the Protectorate.

The Empire Cotton Growing Committee, it will be remembered, presented two motor tractors and ploughs and harrows to the Uganda Government in 1921, whilst the Corporation presented 90 ox-drawn ploughs in 1923. At the urgent request of the Governor, a further 300 similar ploughs have been presented during the year just completed. A report has been received from the Government of Uganda on the use that has been made of these ploughs, showing that they have been of very considerable service in extending the area under cotton. The tractor ploughs have been utilised in opening up land at the foot of Mount Elgon, and the land, after having been ploughed and made ready for the crop, has been allotted to natives from the hill tribes in that region who would not otherwise have cultivated any crop in addition to their food. The total area ploughed with these tractors amounted to 780 areas, accommodating approximately 1,500 new producers of cotton on half-acre allotments.

The ox-drawn ploughs were in the first instance utilised in the ploughing schools established by the Department of Agriculture for training purposes: as soon as natives had been trained as ploughmen the ploughs were loaned out for work on smallholdings, or were used in carrying out communal ploughing schemes.

In past years the movement of the cotton crop from Uganda to Mombasa has occasioned considerable anxiety, as a large proportion of the crop had to be carried down the railway from Lake Kioga to Jinja, loaded on to the Lake steamers at that port, and carried across Lake Victoria to Kisumu, the terminus of the Uganda Railway, thence being carried down that railway to Mombasa.

Difficulties of and delays in handling caused the accumulation from time to time at both Jinja and Kisumu of a large number of bales, for which there was inadequate storage, and which in consequence were damaged by exposure to the rain. The railway developments, on which the expenditure has now been sanctioned and a loan made for the purpose by the Imperial Government, have already been referred to by the Executive Committee in their Quarterly Reports to Council. These developments possess such importance for the transport of the Uganda cotton crop, and the opening up of new potential cotton-growing areas, that they may perhaps be summarised again.

Luzinga, a station on the Lake Kioga-Lake Victoria Railway, which taps a very important cotton area, will be brought into direct connection with the Uganda Railway via Turbo, a station on the Uasin Gishu branch of that line. By this means cotton grown in the Lake Kioga area can be placed on the rail and transported direct to the coast. It is also intended to run branch lines northward and southward: the former will run from Tororo, a station on the Kenya-Uganda border, through the Eastern Province of Uganda where two-thirds of its cotton is grown, while the latter will enter North Kavirondo, which is regarded favourably as a future cotton area. Further, the main line in Kenya between Nairobi and Mombasa is to be relaid with heavier metals, and a considerable sum is to be spent on port improvements at Kilindini. The beneficial effect which these improved transport facilities will have on the development of the cotton-growing industry of both Uganda and Kenya will be readily recognised, and the Corporation appreciate highly the action of the Government in this matter.

During the year Mr. Wood, the Corporation's Cotton Specialist in Tanganyika, was able to pay a short visit to Uganda and to confer with the Director of Agriculture and his senior officers.

TANGANYIKA TERRITORY.

It was reported last year that the Corporation had made a grant of £5,000 to the funds of the Agricultural Department. It was pointed out at the same time that grants from the Corporation were intended to enable such Departments to undertake additional work on cotton which they would be unable to carry out without assistance, and not merely to relieve them of a part of their normal

financial charges. Further points of difference emerged during the year, and the Council regret to report that a satisfactory basis of co-operation has so far not been found. In the absence of co-operation satisfactory to both parties between the Corporation and the local Government full use has not and cannot be made of the Corporation's officers in the Territory, and the Colonial Office has been informed that it is intended to withdraw them at the close of the present cotton season. Mr. Wood, the Corporation's Cotton Specialist in the Territory, has therefore been instructed to hand over to the Director of Agriculture the cotton selections which he has grown at Mpanganya on the Rufiji and at Morogoro on the Central Railway in December next when his tour will end, while Mr. McEwen, Mr. Wood's Assistant, is proceeding to Nyasaland as Mr. Sampson's Second Assistant in that Protectorate.

The Corporation's Specialist in the Territory has drawn attention to the possibilities possessed by the country northwards from Tabora, and the Corporation have urged the desirability of running a branch line starting from Tabora on the Main Railway with a view to developing this area. They are gratified to be able to report that the expenditure for the first 80 miles has now been sanctioned.

NYASALAND.

The buildings and preparatory work at the new Cotton Experimental Station situated at Makwapala, some ten miles from Zomba, the Capital, are nearing completion. It will be remembered that the Corporation agreed to provide two-thirds of the capital expenses of this station, whilst the local Government provided one-third and made themselves responsible in addition for the road linking up the Station with the nearest existing main road. The Executive Committee have allocated a sum up to £250 a year for three years as the Corporation's share of the recurrent expenditure in connection with the Experiment Farm, together with the salaries of any European staff engaged in its management. Mr. Sampson has been experimenting with a number of types of cotton, the seed of which he was able to secure during his tour in America.

The damage done by the red boll-worm is still very considerable, and Mr. King, the entomologist sent out by the Corporation to assist the Government entomologist in his cotton work, is still

carrying out his investigations in the hope that it may be possible to devise means for controlling this pest. Mr. Wortley, the Director of Agriculture, arrived on leave during August, and the officers of the Corporation have been able to consult with him regarding the Corporation's work in the Protectorate. Mr. Wortley has expressed in the warmest terms his appreciation of and gratitude for the assistance given by Mr. Sampson and his staff, which he describes as having been invaluable.

NIGERIA.

Mr. Faulkner, the Director of Agriculture, has been able to complete the additional appointments to his staff which were authorised by the Colonial Office, and the Corporation have not, therefore, sent any men to this Colony. During Mr. Faulkner's presence in England on leave he has had frequent conferences with the officers of the Corporation.

Mr. O. B. Lean, who held a Junior Studentship under the Corporation last year and worked upon cotton pests at the Imperial College, South Kensington, under Professor H. Maxwell Lefroy, is being sent to Nigeria this year in order that he may have an opportunity of studying the pests of cotton at first hand. The thanks of the Corporation are due both to the Colonial Office and to the Governor for their courtesy in according to the Corporation these facilities for the further training of Mr. Lean, and to Mr. Faulkner for his kindness in undertaking to supervise his work.

The despatch of two transport units for experimental trials in Nigeria is reported under the heading "Mechanical Transport."

The attention of the Corporation has been drawn to the difficulty that has been experienced in securing rolling stock on the railways in Nigeria, both for bringing in the seed cotton and for transporting the lint to the coast. The difficulties have been increased by a shortage of engine drivers as well as of wagons, but the Director has ascertained from the Governor while on leave that steps are being taken to make good the deficiency in both respects.

BRITISH WEST INDIES.

(a) *Imperial College of Tropical Agriculture, Trinidad.*—It will be remembered that the Corporation in 1922 made a grant of £500 per annum for two years to the Imperial College of Tropical

Agriculture. This grant expired in July of this year, and the Executive Committee propose that the grant should be renewed.

Funds are urgently required by the College, both for buildings and endowment, and Lord Milner has recently issued a public appeal for this object. To this appeal the Corporation have made a contribution of £2,000. In making this contribution the Committee took into consideration not only the fact that the Corporation avail themselves largely of the facilities offered by the College for training holders of their Studentships (four worked at the College last year and six are there this year), but also the fact that the Colonial Office have under consideration a comprehensive scheme for sending men selected for appointment to the Agricultural Departments in different tropical dependencies to take a course at the College either before they go to their posts, or after a first tour of tropical service. If this scheme is ultimately adopted, the College will play an extremely important part in raising the qualifications of Government agricultural officers, and the need for better-qualified men in these posts has repeatedly been emphasised by the Corporation as being one of the first essential steps in the direction of increasing and improving the output of cotton in the Empire.

Members of the Corporation will learn with regret that Sir Francis Watts has retired from the Principalship of the College after twenty-five years' service in the West Indies. During the last two years Sir Francis has discharged the duties both of Principal of the College and of Imperial Commissioner of Agriculture. The establishment of the College is very largely the outcome of his foresight and enthusiasm, and its work should have far-reaching results. The new Principal is Dr. Martin Leake, whose work upon cotton in India is widely known. Dr. Leake was a member of the Indian Agricultural Service for twenty years, during the last five of which he was Director of Agriculture for the United Provinces, and in conjunction with Sir John Russell he recently carried out a tour of the Sudan in order to make recommendations regarding the co-ordination of agricultural research in that territory. It is gratifying to the Corporation to know that in the new Principal the College has one who is specially interested in cotton.

(b) *Research*.—Mr. L. H. Burd, the Corporation's Cotton Research Worker in St. Vincent, is still carrying out his investigations.

After working for two years in that island he returned home on leave in May last, and sailed again for St. Vincent in August. Mr. Burd published one paper dealing with his work in the first number of the *Empire Cotton Growing Review*, and a second paper appears in the October number.

CEYLON.

The Governor of Ceylon has asked the Corporation whether it would be possible for them to arrange that an expert should visit that Island and report on the cotton experiments that are being carried out by the Department of Agriculture, and on the possibilities of future production on a commercial scale. It is hoped that it will be possible to arrange that an officer may be sent on deputation by the Government of India for this purpose, and the matter was fully discussed at a meeting between the Director of Agriculture, who is home on leave, the Secretary of the Indian Central Cotton Committee, and the Director of the Corporation.

JOURNAL.

The first volume of the *Empire Cotton Growing Review* has now been published in four quarterly numbers, which appeared in January, April, July and October. The number of subscribers already amounts to 258. It is hoped that as time goes on the Journal will become the recognised medium by means of which information will be disseminated which is of importance either to the spinner or to the grower of cotton, and thus become the link between the two which is essential to their successful co-operation in the production in the Empire of those types of cotton that are most suitable for Lancashire's needs. In the hope of obtaining a wide circulation, and of obtaining as many subscribers as possible, the subscription rate has been fixed as low as 5s. per annum post free.

STUDENTSHIPS.

Of the eleven students appointed last year seven are going to Uganda, as mentioned above, four in the service of the Corporation and three as members of the Colonial Civil Service. The destination of the remaining Senior Student has not yet been definitely decided.

Two of the three Junior Students of 1923/24 are going to Trinidad for their Senior year, and, as has already been stated, one is going to Nigeria.

In view of the general shortage of suitably-trained men for scientific or agricultural posts in cotton-growing countries, the Executive Committee decided to appoint this year as many students as possible, provided that the standard required was fully maintained. Sixteen students have accordingly been elected for the coming academical year, including the three men just alluded to who held Junior Studentships last year. Of the new Senior appointments four will go to Trinidad, one man will spend his year at Cambridge, and one at Wye. Of the seven Juniors appointed, five will go to Cambridge, one to Wye, and one to the Imperial College, South Kensington.

RESEARCH.

(a) *Central Research Institute.*—The small Sub-Committee of experts appointed by the Executive Committee to consider the advisability of the establishment by the Corporation of a Central Research Institute have held several meetings. From the first it was agreed that important advances in the production of improved cottons were most likely to be made through systematic organised research, carried out in a cotton-growing country. The Committee thereupon considered exhaustively the relative advantages and disadvantages of various localities that might be suitable for the establishment of a station designed for this purpose. In the first place, however, before coming to a final decision as to a site, they await a report which Dr. Leake has kindly undertaken to make on Trinidad, or possibly preferably Tobago, as a possible locality. These islands have the special advantage of already possessing at the Imperial College of Tropical Agriculture a number of scientific men with whom the Corporation's staff could discuss their problems, and a library which could be consulted whilst the library of the research station was being accumulated. At the same time, although many different cottons are being grown for experimental purposes in Trinidad, the Committee remain somewhat apprehensive as to whether the climate is sufficiently dependable to make the island wholly suitable for their purpose. In the second place, it is generally felt that any research station which may be set up should be self-contained, autonomous, and devoted entirely to research, rather than that use should be made of facilities already existing, whether in Trinidad or elsewhere; but the recommendation of the Committee will probably take the form of advice that a

beginning should be made on a comparatively modest scale only, so as to avoid expenditure on extensive buildings and a large staff, until the suitability of the site ultimately chosen, and the soundness of the lines on which the work is planned shall have been definitely proved. For these reasons the Committee have so far made no report since they have thought it better to refrain from doing so until they are in a position to submit a concrete proposal for consideration by the Executive, but as mention was made of this matter in the last Annual Report, a reference to the progress that has been made seems desirable.

(b) *Spinning Tests*.—Owing to the kindness of the Fine Cotton Spinners' and Doublers' Association and of other cotton spinning firms, it has been possible to offer to undertake, for Directors of Agriculture and others engaged upon cotton breeding, spinning tests upon small samples of cotton. A circular letter was sent out to all those who might be interested in this offer during the year, and a number of samples have already been received and reported upon: a broker's report and valuation has in each case also been secured through the kindness of Messrs. Wolstenholme & Holland. Whilst the cotton breeder cannot, of course, tell, from the results of spinning tests carried out upon the various types with which he is experimenting, the commercial value of his different cottons if produced in bulk, the information he receives is sufficient to enable him to determine which of his selections are suitable for further propagation and which may safely be discarded as being types inferior to some of the other varieties that have been tested. It is hoped, therefore, that these tests may save him a large amount of unnecessary labour.

In addition to these experimental tests, arrangements have been made for carrying out full-scale spinning tests such as those mentioned under the section of "India" above. The Corporation gratefully acknowledge their indebtedness to those spinning firms who have given facilities for either kind of test to be conducted in their mills and under the supervision of their staffs.

MECHANICAL TRANSPORT.

In the belief that improved transport is one of the chief problems that awaits solution if the cotton-growing possibilities of the Empire are to be fully and rapidly developed, the Executive Committee have appointed a small committee of experts consisting

of engineers, together with the Assistant Director, to enquire into the various types of vehicle that might be useful for transporting cotton both from the fields to the ginneries and from the ginneries to the railways.

If the claims of the makers of some of the forms of "caterpillar" and "track" vehicles now on the market prove to be valid, the use of such vehicles might prove very advantageous, since they will not only travel on, but improve and consolidate, unmetalled roads, a fact that would facilitate the development of many outlying districts, and enable cotton growing to be extended to areas where means of transport are at present lacking or deficient.

After examining numbers of types of such vehicles, this Committee recommended to the Executive that two transport units, consisting of one Burford 2-ton lorry with Kégresse attachment, and one Guy 25 cwt. lorry with Roadless Traction attachment, both with a supply of spare parts, etc., and four light trailers should be sent for trial in Nigeria, and this recommendation has been adopted. The vehicles will be in the charge of two expert drivers, who will render full reports upon their working. It is proposed that the lorries should accept loads of cotton and other crops at current transport charges, and after they have been in use for some little time it will be possible to see whether either of the two types is suitable for African conditions, and how their running costs compare with other means of transport, human, animal, and mechanical. It is hoped that the results thus obtained will be of assistance to local Governments in the consideration of their transport problems in the future.

The Sub-Committee are continuing their investigations upon the problem of cotton transport, and in particular they have been asked to examine the possibilities of producer gas and heavy oil engines.

BRITISH EMPIRE EXHIBITION, 1924.

In accordance with the decision reported last year, a joint exhibit has been staged by the Corporation, the British Cotton Growing Association, and the Liverpool and Manchester Cotton Associations. The exhibit forms the entrance hall to the whole of the Cotton Section, and visitors are thereby enabled to pass from the raw cotton section to the machinery hall, and to see cotton in all its stages from the raw material to the finished article.

A number of representative bales from the more important cotton-producing Dependencies are on view to illustrate methods of baling and packing and to give the general public an idea of the form in which the raw material arrives in this country.

Loose samples of practically every type of cotton grown in the Empire and used in Lancashire are available for general information, and can be handled. The Section is decorated with a collection of photographs showing the various stages of cotton production in most of the countries of the Empire where it is grown. Several show cases illustrating the life history of the more important cotton pests are also displayed.

FUTURES CONTRACT FOR EMPIRE GROWTHS.

The Council have adopted a resolution of the Executive Committee to the effect that the provision of a satisfactory hedge for Empire-grown cotton would facilitate the marketing of these cottons, and thus encourage growers. The Liverpool Cotton Association have been, and still are, giving this difficult matter their very careful consideration, and the Corporation understand that, while there is general agreement that such facilities are desirable, there is a marked divergence of opinion in Liverpool as to the means whereby they can best be provided. The Corporation hope that a solution satisfactory to both brokers and spinners alike may be reached in the near future.

PERSONNEL.

The Governor of Uganda has informed the Colonial Office that, in his opinion, it would be advantageous if Colonel French, the Assistant Director, could pay a visit to the Protectorate. Arrangements have accordingly been made for Colonel French to visit Uganda this winter, and if it is found possible he will also visit Bombay in response to a cordial invitation received from the Secretary of the Indian Central Cotton Committee.

Mr. Engledow, of the School of Agriculture, Cambridge, who supervises the work of the Corporation's Students at that University, visited the United States this summer in connection with his work on the breeding of cereals. Advantage was taken of this circumstance to arrange for him to prolong his tour at the expense of the Corporation, in order that he might spend a short time in the Cotton Belt also, and thus extend his experience of the conditions under which this crop is grown.

THE EMPIRE COTTON GROWING CORPORATION.

REVENUE AND EXPENDITURE ACCOUNT, Year ended 31st March, 1924.

To EXPENDITURE ABROAD.							
	£	s.	d.	£	s.	d.	
<i>Tanganyika</i> —							
Salaries and Passages	...	2,479	11 11				
Local Travelling, Labour and Materials	...	932	6 0				
Grant for Cotton Development	...	5,000	0 0				
<i>Nyasaland</i> —							
Salaries and Passages	...	2,569	18 8				
Local Travelling, Labour and Materials	...	474	12 3½				
Cotton Experiment Station...	...	968	18 11				
<i>Australia</i> —							
Salaries and Passages	...	2,101	0 9				
<i>South Africa</i> —							
Salaries and Passages	...	1,531	2 1				
<i>Sudan</i> —							
Tour and Report of Sir John Russell and Dr. Leake, actual and estimated	...	1,228	9 0				
<i>W. Indies</i> —							
Salaries and Cost of Experiment Station...	...	759	12 6				
Grant to Imperial College of Tropical Agriculture...	...	500	0 0				
<i>Uganda</i> —							
Ploughs presented to Uganda Government...	...	486	10 3				
				19,032	2 4½		
" Tour in America of Mr. H. C. Sampson	...	...	...	450	10 9		
" Studentships, including Passages and Grants for Books and Apparatus	...	...	...	3,351	1 5		
" British Empire Exhibition	...	...	...	706	13 10		
" Grants for Research	...	...	...	2,500	0 0		
" Spinning Tests, Purchase of East India Cottons	...	...	...	144	4 3		
" Office Staff. Salaries	...	...	...	6,198	1 6		
" Rent	...	...	...	700	0 0		
" Gas, Electricity and Telephone	...	...	...	70	7 6		
" Upkeep of Offices	...	...	...	202	8 8		
" Travelling Expenses—Members of Council, Committees and Staff	...	...	...	1,000	1 7		
" Legal Expenses and Accountancy Charges	...	...	...	126	15 7		
" Printing and Stationery	...	...	...	620	6 6½		
" Printing and Publishing "The Empire Cotton Growing Review"	...	...	...	253	1 5		
" Sundry Expenses	...	...	...	248	17 9		
" Depreciation of Furniture and Fittings	...	...	...	59	19 9		
" Balance, being Excess of Revenue over Expenditure for the year	...	...	...	55,274	0 6		
				£90,938	13 5		

By Cotton Levy from 18th July, 1923, to 31st March, 1924	...	...	...	£	s.	d.
" Interest and Dividends from Investments representing the Capital Grant	...	...	...	55,411	10 8	
Do. Surplus Income	...	...	...	717	0 5	
" Bank Interest	...	...	...	...	...	56,128 11 1
" Sale of Reports	...	...	...	...	...	263 5 0
				...	...	25 16 0

THE EMPIRE COTTON GROWING CORPORATION.

BALANCE SHEET, 31st March, 1924.

LIABILITIES.		£	s.	d.	£	s.	d.
CAPITAL GRANT from Imperial Government		97,875	0	0			
COTTON LEVY—							
Amount collected to 31st March, 1923		75,909	7	0			
Do. 17th July, 1923...		12,223	2	6			
Interest on Investments and Bank							
Balance representing the Levy ...		2,097	12	6			
		90,230	2	0			
Less Return of amounts contracted up to 17th July, 1923...		62,775	0	7			
		27,455	1	5			
Amount transferred to Revenue and Expenditure Account ...		27,455	1	5			
Sundry Creditors ...					2,072	15	6
REVENUE AND EXPENDITURE ACCOUNT.							
Balance at 31st March, 1923 ...		13,244	9	6			
Excess of Income over Expenditure, Year to 31st March, 1924 ...		55,274	0	6			
Amount transferred from Cotton Levy Account ...		27,455	1	5			
		95,973	11	5			
		£1,076,761	6	11			

We have audited the above Balance Sheet and the Revenue and Expenditure Account and certify that all our requirements as Auditors have been complied with. We report to the members that in our opinion the Accounts are properly drawn up so as to exhibit a true and correct view of the state of the Corporation's affairs as shown by the books of the Corporation.

(Signed) DAVID SMITH, GARNETT & CO.,

CHARTERED ACCOUNTANTS, MANCHESTER.

16th April, 1924.



